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The

WisDOT Connector

Informing Wisconsin on key transportation issues



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TRANSPORTATION NEWS IN BRIEF

0.08 Law: saving lives in Wisconsin

Wisconsin's 0.08 law, which marked its first anniversary on September 30, 2004, appears to be doing the job it was intended to do: making Wisconsin roads safer by reducing the number of crashes, injuries and deaths associated with drunken driving.

Governor Jim Doyle signed the law setting the prohibited alcohol concentration for first and second offense OWI (operating while intoxicated) at 0.08 blood alcohol concentration (BAC) on July 3, 2003.

A preliminary analysis of Wisconsin crash data conducted by the Wisconsin Department of Transportation (WisDOT) indicates that alcohol-related crashes, injuries, and fatalities were significantly reduced in the first nine months since 0.08 took effect (Oct. 1, 2003 - June 30, 2004) compared to the same nine month period in the previous year.

The 0.08 law had not been expected to increase the number of convictions, because it did not change the rules and procedures of probable cause. Indeed, the number of drunk driving-related convictions has remained roughly the same before and after 0.08.

Based on the first nine months of data, there were 47 fewer people killed in alcohol-related crashes during the first nine months of the 0.08 law than there were during the same nine-month period before 0.08. This was more than a 17% reduction.

Some 487 fewer people were injured in alcohol-related crashes, more than a 10% reduction. And there were 164 fewer alcohol-related crashes overall, which was more than a 2% reduction.

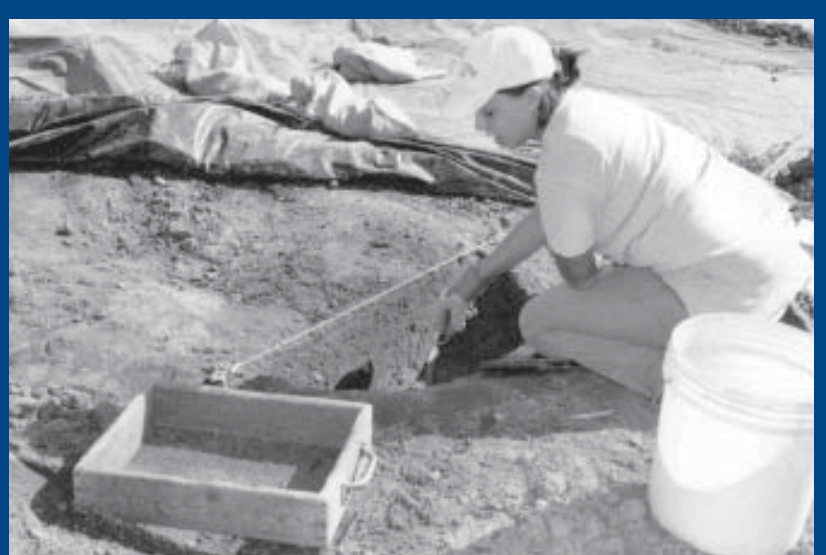
Motor vehicle-deer crashes remain a serious threat

October and November are the peak months for crashes between motor vehicles and deer. In 2003, investigating officers reported 21,666 motor vehicle-deer crashes in Wisconsin. Of those, 7,620 (35.2% of the yearly total) occurred in October or November. Deer crash related injuries and deaths are also on the increase. Last year, 792 people were injured and 13 people were killed in deer crashes, one of the highest totals in 25 years of tracking. Some 221 of those injuries were in the October and November period.

Deer crashes are accounting for a growing percentage of all reported crashes. For example, in 1978 deer crashes accounted for only about 5% of all crashes. By 2003, that percentage had increased to 16.5%. Motorcyclists need to be alert to deer. In 2003, about 85% of motorcycle-deer crashes resulted in fatality or injury to a motorcyclist. In fact, eight of the 13 motor vehicle-deer crash fatalities last year were motorcyclists.

WisDOT works to preserve archaeological sites

Archaeology is the scientific study of material remains, such as arrowheads, stone tools and pottery from past Native American cultures. Through the excavation and analysis of artifacts, we come closer to envisioning what life was like for our ancestors. Archaeology is important because it tells us about everyday life of times gone by. It is used to prove theories about people, places and events in history. Many people think that archaeologists waste their time scraping and sifting dirt. Others believe that archaeology delays highway projects and is an unnecessary expense. Neither of these notions are correct. This issue of the WisDOT Connector reviews WisDOT's role in discovering and preserving archaeological treasures.



Top left: Phase 1 project in Iowa County - identifying the presence of artifacts

Left: Phase 2 project - evaluation

Above: Phase 3 project - data recovery

Archaeology along highway projects is needed to ensure that archaeological sites are not affected by the project. When it is not possible to avoid an archaeological site, steps are taken to minimize and/or mitigate the effect upon the site. Artifacts contained in the sites are a part of history, which cannot be replaced. Though the function of the Wisconsin Department of Transportation (WisDOT) is to provide the public with an efficient and safe network of transportation, WisDOT is deeply concerned about the protection of Wisconsin's cultural heritage.

Archaeological studies are conducted for all WisDOT highway projects. Under Section 106 of the National Historic Preservation Act of 1966, the agency must identify, assess, evaluate, avoid, and if necessary, mitigate its project's effect upon an historic property. In brief, WisDOT must consider archaeological sites during project development.

The process archaeologists follow in locating archaeological sites along WisDOT projects

may consist of one, two or all of the following:

- ◆ Phase I - identification - archaeology survey consists of visually inspecting the ground or digging small holes to look for objects people left behind.
- ◆ Phase 2 - an evaluation study determines if the site is eligible for National Register of Historic Places; and
- ◆ Phase 3 - data recovery is the excavation of the site.

Through these phases Native Americans and government officials work hand-in-hand to ensure archaeological discoveries along highway projects are studied.

Phase 1: Identification

The first step of an archaeological study is Phase 1



Pottery found at LaCrosse archeological site.

- identification. If nothing is found during this study, the archaeologist prepares a report of this finding for the project manager. The State Historic Preservation Officer (SHPO) reviews the results of findings and, if he/she agrees with the results, the project can then proceed. If a site is located and may be eligible for the National Register of Historic Places, WisDOT's first action is to avoid the site or, if this is not possible, proceed to the Phase 2.

Phase 2 and 3: Evaluation and data recovery

Evaluation is the second phase of the study. During this phase, the archaeologist carefully digs excavation units. When the archaeological study produces evidence that a site is eligible for the National Register, the site must be avoided or data recovery/mitigation of the site must be conducted. Data recovery is the third phase and consists of recovering information on past lifeways of the people who lived at the site. At this time, WisDOT staff consult with the

"Sites" continued on page 3

WisDOT discovers historical sites in Wisconsin

The year 2001 was an eventful year as archaeologists working for the Department of Transportation (WisDOT) discovered historical remains of what used to be a Native American village. More than 600 refuse, or storage pits, were found along the US 10 highway expansion project, which stretches between Waupaca and Amherst. “We have been searching this area for artifacts since the early 90s,” said Kelly Hamilton, director of the Archaeology Program at the Wisconsin Historical Society.

Through the hard work and dedication of archeologists like Hamilton and her staff, three sites along the US 10 corridor were determined eligible for the National Register of Historical Places. Hamilton had no regrets about the hard work. “Sometimes we put in 12 hours of work just to find one artifact, but it is always worth the time. I love my work,” said Hamilton.

The first site, the Blinded by the Light site, was located along the Waupaca/Portage county line. The 90-acre site had more than 250 storage pits that archeologists believe define individual households.

By cleaning the artifacts and studying them, archeologists determined that they were

from the Oneota people. According to Hamilton, the Oneota lived in this area 1,000 years ago. An examination of various storage pits within the Blinded by the Light site showed they farmed, growing foods such as squash.

The second and third sites, Dambroski and the Burley Brew, were located slightly west of the Blinded by the Light site. The 40-acre Dambroski site is located near the Waupaca River flood plain and contains more than 200 features. These features included basin pits and post molds. The post molds are believed to be portions of longhouses that the Oneota people inhabited. The Burley Brew site was located north of the Waupaca River and is roughly 100 acres in size. Over 200 features were also found in the Burley Brew site.

All three of the sites contained similar artifacts such as animal bone, carbonized seeds, pottery, stone carving tools and arrowheads. Archaeologists were also able to identify a population increase in the area, which occurred between 1100 AD and 1300 AD. This increase was a result of a technological advance in farming that archaeologists call “horticulture.” Horticulture was the beginning stage of agriculture, as we know it today.



Above: A local television camera operator gets a closer look at artifacts being excavated from an Oneota village along the Waupaca River.

Below: Archaeologists carefully scrape the ground, searching for artifacts and other clues to understand the past.



Archaeologists from the Wisconsin Historical Society monitor the removal of the plow zone from an archaeological site. Excavations at the site revealed numerous storage and refuse pits beneath the plow zone.



Elizabeth Handwerk carefully exposes a storage pit created over 1000 years ago by Native Americans living near Hay Meadow Creek in Portage County.

Wisconsin's prehistoric inhabitations

Archaeologists study human behavior through the material remains left by past cultures. Scientists have worked to assess the continuity of stone-tool features that are used to identify the tradition and to establish how these tools changed over time. Studies of material culture usually discuss these stylistic changes in terms of the ways in which the food-getting behaviors of the people who made and used these tools also changed over time.

Archaeologists use the term *tradition* to describe distinct groups of artifacts manufactured during a specific time period. Within traditions, differences in material culture that are more localized, or less long-lasting, are considered to be *cultural complexes*.

WisDOT works in conjunction with many partners to preserve Wisconsin's history. Wisconsin's Native American history includes:

Paleo-Indian Tradition (10,000 – 6,000 BC)

The Paleo-Indian Tradition is believed to be the earliest humans that ever lived in Wisconsin. The first Paleo-Indians were thought to have

come to Wisconsin around 12,000 years ago when glaciers began to melt and livable land appeared. The Paleo-Indians were thought to be nomadic because they followed animal migrations. Paleo-Indians were gatherers of plants and hunters of animals such as bison. Archaeologists in Wisconsin have discovered manufacturing pits where tools were made of stone. The stone tools, called projectile points, have been found in the remains of bison. Points were used as knives to kill, butcher game and to remove the hides of animals.

Archaic Tradition (6,000 -1,000 BC)

For the most part, the Archaic Tradition is a continuation of the Paleo-Indian Tradition. The changes at this point were still very gradual. As the climate in Wisconsin continued to change, other animals such as deer migrated north. Archaic Indians were hunters and gatherers like the Paleo-Indians but they also were fishermen. The change in the environment created a new development of projectile point shaped weapons which were used to hunt deer and other small animals throughout Wisconsin.

“Tradition” continued on page 4

Door County inhabited more than 10,000 years ago

During September of 2003, archaeologists found evidence of prehistoric artifacts while working along the proposed expansion route for WIS 57 in southern Door County between Green Bay and Sturgeon Bay. “Archaeological investigations at the Boss Tavern site revealed six distinct archaeological deposits,” according to Dr. David F. Overstreet, an archaeologist at Marquette University.

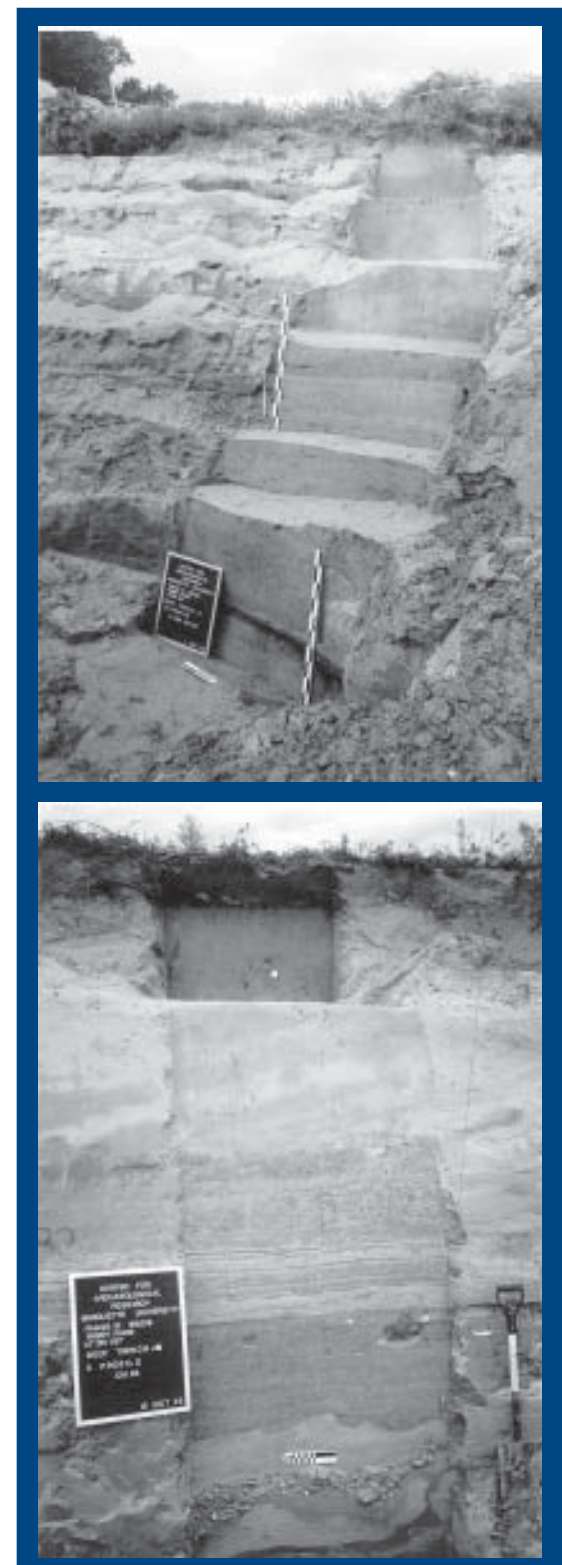
The first findings at the Boss Tavern site date between 950 AD and 1200 AD and are called the Mero Complex by archaeologists. Trash and storage pits, arrowheads, chipped stone tools, knives and human remains were discovered. Charred maize, or corn, and grinding stones were also found in the Mero Complex, which brought archaeologists to an amazing conclusion. “There had been no evidence that the Mero Complex people on the Door Peninsula were growing maize (corn) in the same manner as related prehistoric cultures to the south,” said Dr. Overstreet. For years scholars believed that it was not possible for maize (corn) to efficiently grow in the north because of cold temperatures. However, researchers along the Mero Complex site discovered ridged fields that functioned as frost-drainage systems, which helped the corn grow in colder areas.

Underneath the Mero Complex, findings dating to 500 BC were unearthed. Items such as stone and copper tools were dug up and believed to be from the North Bay culture. “During this period, the Boss Tavern site must

have been a very transitional occupation given the distribution of artifacts and their low concentrations,” said Dr. Overstreet. Researchers also found pottery, which represents the first manufacturing of ceramic containers in this area.

As archaeologists got on hands and knees and dug deeper at the Boss Tavern site, three separate discoveries that originated from the Paleo-Indian Tradition were found. “The youngest of the three is about 10,000 years old,” said Dr. Overstreet. “This layer is situated about 2 feet beneath the surface and somehow escaped disturbance by years of agricultural practice.” Hide scrapers and other tools were the main items found in this layer; about 3 feet beneath the surface, an older habitation was discovered. The findings are believed to be more than 10,000 years old with water-rolled implements, which mark the rising of the waters prior to the glacial Lake Algonquin.

At about 5 to 6 feet beneath the surface is where the oldest discovery was made. “Large rocks and clasts (blocks) of clay occur at the top of this deposit,” said Dr. Overstreet. The findings are believed to be connected to the glaciers surrounding Lake Oshkosh around 11,000 to 12,000 years ago. “The drainage of glacial Lake Oshkosh was pretty catastrophic and it must have drained out very quickly,” said Dr. Overstreet. “An analogy from today would be like waking up in the morning and finding the shoreline of Lake Michigan had receded to a mile or more off shore.”



Top: Stepped trench showing 11,000 year old organic layer at base. This layer is associated with the draining of glacial Lake Oshkosh.

Bottom: Trench depicting layer (water-laid) sediments from glacial Lake Algonquin (ca. 10,600 years old) and wind-blown sediments resting on water-laid sediments.



A 10,000 year old Agate Basin spear point is found in the excavation floor.



Part of a Mero Complex pot dating between ca. 1000-1300 AD

“Sites” continued from page 1

Federal Highways Administration (FHWA), Native Americans, the State Historic Preservation Officer (SHPO), other agencies and other interested parties. During the consultation process, all parties attempt to reach consensus to avoid the site, or redesign the project to minimize impacts to the site. Once a consensus is reached between all parties, it is documented in a Memorandum of Agreement.

Burials

During archaeological studies, the archaeologist may encounter burials. In accordance with the Wisconsin Burial Law, when human remains are located, all work must stop immediately and the Burial Sites Office at the Wisconsin Historical Society and the Native American Tribes must be notified. Consultation



Arrowheads found at a site in LaCrosse county.

begins and decisions are reached as to treatment of the human remains. In most cases, the project is redesigned to avoid disturbance to the burial site.

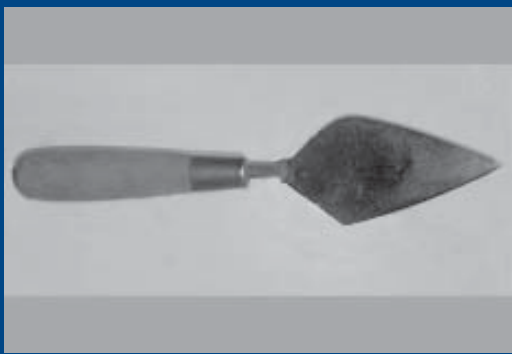
Inadvertent discoveries

Inadvertent discoveries are instances when archaeological material or human remains are encountered during construction. Whenever archaeological or human remains are located, all construction activity must stop immediately. Consultation is held between WisDOT, FHWA, the SHPO, and Native Americans to determine the proper treatment of the site.

WisDOT is committed to the archaeological research conducted to ensure that sites are preserved or studied prior to highway construction.

Tools of the trade

Archaeologists use many different types of tools during a dig. The tools chosen depends on what is being excavated and where the site is located.



Trowel used by archaeologists

The main tool used by archaeologists is the flat masonry trowel, which is also used to spread cement. The trowel is used to scrap away layers of the earth so researchers can carefully examine it as they dig. In addition, shovels are used to dig up loose dirt which is put in wheelbarrows. The loose dirt is then put into sifters that allow the dirt to fall through while catching small artifacts.

When delicate findings such as skeletons are unearthed, tiny brushes are used to clean the excess dirt off the bones. Archaeologists also use tape measures to keep track of depths and to map out sites where artifacts exist.

More recently, archaeologists have been using the GPS (Global Positioning Satellites) technology to obtain site information. The GPS system allows researchers to photograph larger areas, which was not possible in the past.

As you can see, archaeologists use many tools in collaboration to help unearth the prehistoric artifacts in the great state of Wisconsin.



“Tradition” continued from page 3

Summer and spring were the seasons to fish, while winter and fall were the seasons to harvest seeds and hunt game. The Archaic Tradition introduced copper tools which were used for fishing, hunting, personal jewelry, and woodworking. Archaic Indians buried their dead in natural knolls or flat cemeteries rather than burial mounds. Within the burial knolls archeologists in Wisconsin have found artifacts such as beads, necklaces, and blades.

Woodland Tradition (6,000 BC – 1,000 AD)

The Woodland Tradition natives were hunters and fishermen and showed the first signs of cultivating the land for crops.

Due to their agricultural development, Woodland natives were able to live in villages and relied more on agriculture than fishing or hunting game.

During the Woodland Tradition, people began using locally available clay to make pottery. Pots were used to cook or to grind harvested grains such as corn, beans and squash. The pottery found in Wisconsin varied. Some pottery had thick walls with a circular top while other pots had thin walls with decorations on the exterior.

Archaeologists also believe that the Woodland Tradition was the first to bury their dead in mounds. While mounds are found

throughout the state of Wisconsin, animal shaped effigy mounds are largely found in the southern half of the state. Mounds are often found along rivers and on prominent land forms.

Mississippian Tradition (1,000 AD – 1600 AD)

Archaeologists believe that the Mississippian Tradition is the last culture before Europeans came to Wisconsin.

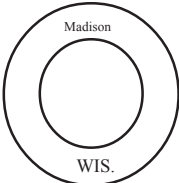
The Mississippian Tradition is known for artifacts such as stone drills, bone tools and ornaments, fish hooks, and copper ornaments. Similar to the Woodland Tradition, Mississippian peoples lived in organized communities and practiced gardening and agriculture. Mississippians also hunted birds, deer and gathered fruits to survive. Many Mississippian villages archeologists have found were close to rivers or wetlands.

Unlike the Woodland Tradition, Mississippian peoples buried their dead in platform mounds or in cemeteries.

Wisconsin has a rich history related to its nations and tribes. WisDOT willingly embraces the great cultures that have lived here and respects the important historical sites. Through archaeological studies conducted for transportation projects, WisDOT has provided a significant amount of information on Wisconsin’s history.



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